



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/668,890

09/23/2003

Paul D. Terpstra

075698-0103

3572

27433

7590

10/25/2004

FOLEY & LARDNER
321 NORTH CLARK STREET
SUITE 2800
CHICAGO, IL 60610-4764

EXAMINER

MCCALL, ERIC SCOTT

ART UNIT

PAPER NUMBER

2855

DATE MAILED: 10/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/668,890	Applicant(s) TERPSTRA, PAUL D.	
	Examiner Eric S. McCall	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-11 and 14-23 is/are rejected.
- 7) ☒ Claim(s) 4,5,12 and 13 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/23/03</u> . | 6) <input type="checkbox"/> Other: ____. |

APPARATUS AND METHOD FOR FUNCTION TESTING

FIRST OFFICE ACTION

TITLE

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

CLAIMS

35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 6-11, and 14-19 are rejected under 35 U.S.C. 102(b) as being anticipated by Sagiya et al. (5,700,951).

With respect to claims 1 and 2, Sagiya et al. disclose that at the time of their invention that a testing system is known in the prior art, comprising:

a testing station (Fig. 4) having an actuator (86/88) with a generally “U” shaped structure comprising a first arm (76) and a second arm (78); and
at least two force transducers (104 & 106).

Note: The structure in Fig. 4 of Sagiya et al. created by the layout of the first arm (76), the second arm (78), and the actuator (86 or 88) has been interpreted as a “generally U shaped structure” as claimed.

With respect to claim 3, the said actuator (86/88) is a linear servomotor as claimed.

With respect to claim 6, Sagiya et al. disclose the first (76) and second (78) arms are each functionally connected to a force transducer (104 & 106 respectively), whereby the force transducer can monitor a force applied by the first arm and a force applied by the second arm.

With regards to claim 7, Sagiya et al. teach the claimed subject matter thereof (col. 1, lines 5+).

With regards to claim 8, Sagiya et al. teach a pinion drive (80) as claimed.

With regards to claim 9, Sagiya et al. teach the pinion drive (80) functionally connected to the rack and pinion assembly input shaft by means of a torque transducer (84).

With respect to claim 10, Sagiya et al. teach a testing device (Fig. 4) for function testing a rack having a first end and a second end, comprising:

a linear motor (86/88) capable of being operatively connected to the rack and adapted to apply resistive force to the rack;

a force transducer (104) adapted to reactively provide a force signal to the linear motor;
and

an actuator (86, 88, and the associated parts therewith) capable of being operatively connected to the rack near the first end and near the second end;

wherein the actuator is adapted to apply force to the ends of the rack (col. 1, lines 31+).

With respect to claim 11, the said actuator (86/88) is a linear servomotor as claimed.

With regards to claim 14, Sagiya et al. teach a pinion drive (80) as claimed.

With regards to claim 15, Sagiya et al. teach the pinion drive (80) functionally connected to the rack and pinion assembly input shaft by means of a torque transducer (84).

With regard to claims 16, 17, and 19, the actuator of Sagiya et al. comprises a generally “U” shaped structure as claimed because the actuator of Sagiya et al. is interpreted as being created by the first arm (76), the second arm (78), the actual actuators/linear motors (86 & 88), and the associated parts therewith all of which has been interpreted as a “generally U shaped structure” as claimed.

With regards to claim 18, Sagiya et al. disclose the first (76) and second (78) arms are each functionally connected to a force transducer (104 & 106 respectively), whereby the force transducer can monitor a force applied by the first arm and a force applied by the second arm.

35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sagiya et al. (5,700,951).

With regards to claim 20, Sagiya et al. teach that the prior art at the time of their invention discloses a method for function testing a device, comprising:

applying a known resistive force to the rack by means of the linear motor (col. 1, lines 31+); and

providing an applied force by means of an actuator to both ends of the rack (col. 1, lines 39+).

However, Sagiya et al. fail to explicitly teach that the prior art at the time of their invention adjusts the applied force response to a force signal from a force transducer.

But, Sagiya et al. teach in their own invention that the applied force response is adjusted to a force signal from a force transducer (col. 5, lines 40+).

As such, it would have been obvious to one having ordinary skill in the art armed with said teaching to adjust the applied force response to a force signal from a force transducer.

The motivation being to properly test the rack to conditions which, as closely as possible, simulate actual operating conditions (col. 5, lines 61-63).

With regard to claims 21 and 22, the actuator of Sagiya et al. comprises a generally “U” shaped structure as claimed because the actuator of Sagiya et al. is interpreted as being created by the first arm (76), the second arm (78), the actual actuators/linear motors (86 & 88), and the associated parts therewith all of which has been interpreted as a “generally U shaped structure” as claimed.

Art Unit: 2855

With regards to claim 23, Sagiya et al. disclose the first (76) and second (78) arms are each functionally connected to a force transducer (104 & 106 respectively) as claimed.

Allowable Subject Matter

Claims 4, 5, 12, and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims because the prior art fails to teach a force comparison and a corresponding actuator/controller action based thereon as claimed in each of the said claims.

RELEVANT ART


The Applicant's attention is directed to the enclosed "PTO-892" form for the prior art made of record and not relied upon but considered relevant to the state of the art of the Applicant's disclosure.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Eric S. McCall whose telephone number is (571) 272-2183.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Eric S. McCall
Primary Examiner
Art Unit 2855
Oct. 21, 2004